

# **Historic, Archive Document**

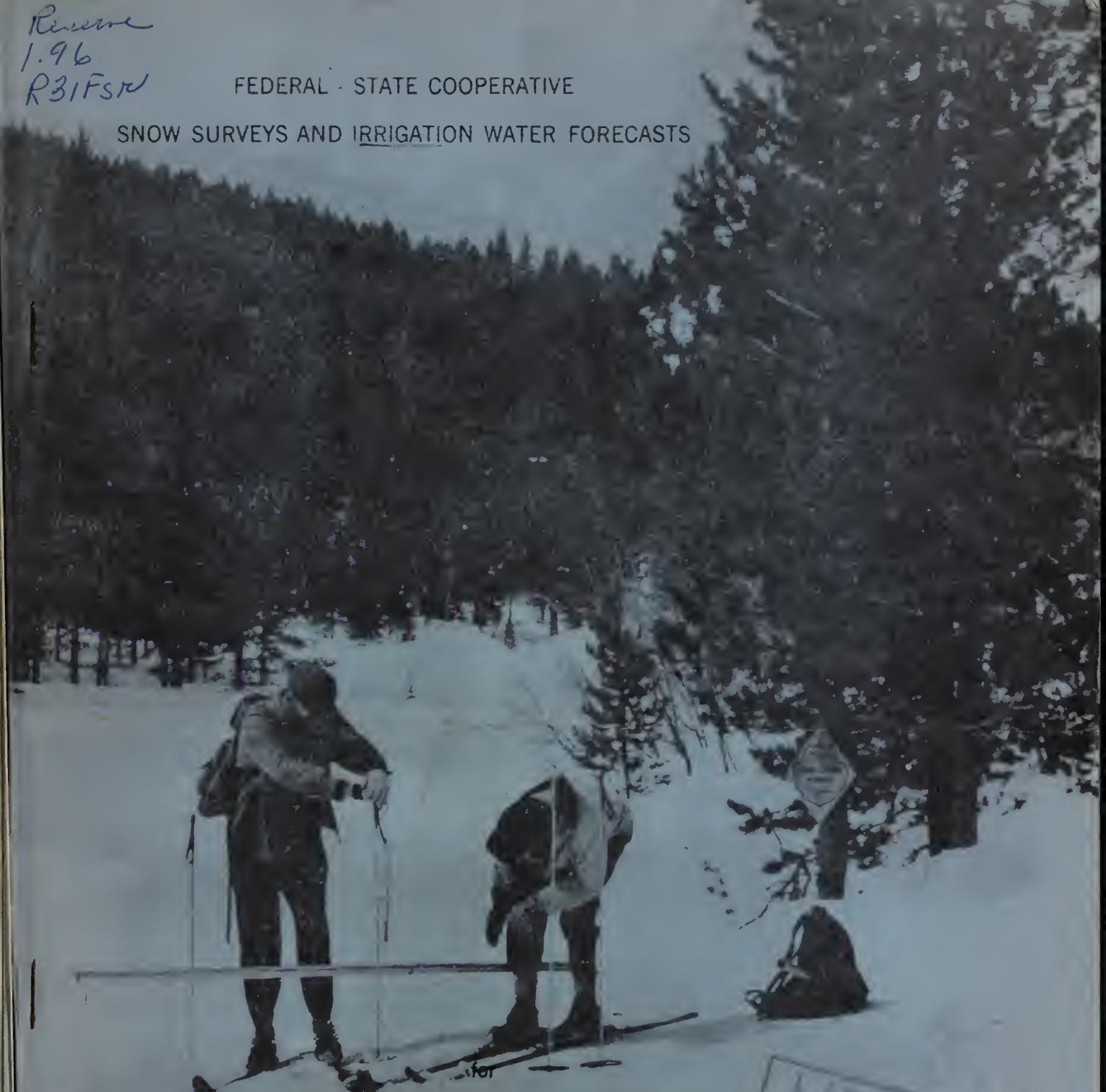
Do not assume content reflects current scientific knowledge, policies, or practices.



Revised  
1.96  
R31FSW

FEDERAL - STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS



## Rio Grande Drainage Basin

By  
Division of Irrigation, Soil Conservation Service  
United States Department of Agriculture  
and  
Colorado Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the U. S. Forest Service, National Park Service, State Engineer of Colorado, Wyoming and New Mexico and other Federal, State and local organizations.

As of  
MAY 1, 1953



UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY  
AND WATER SUPPLY FORECAST REPORTS:

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES.

Weather Bureau forecasts of runoff presented in this bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge  
River Forecast Center  
U. S. Weather Bureau  
712 Federal Office Building  
Kansas City 6, Missouri

FEDERAL-STATE COOPERATIVE  
SNOW SURVEYS AND IRRIGATION  
WATER SUPPLY FORECASTS

For  
RIO GRANDE DRAINAGE BASIN  
May 1, 1953

Report Prepared  
by  
Homer J. Stockwell and Jack N. Washichek  
Snow Survey Leaders  
Fort Collins, Colorado

Division of Irrigation  
Soil Conservation Service  
Colorado Experiment Station  
Fort Collins, Colorado

General Series Paper No. 545  
Colorado Agricultural Experiment Station



WATER SUPPLY OUTLOOK  
RIO GRANDE DRAINAGE BASIN  
May 1, 1953

The water supply outlook for the Rio Grande and its tributaries is far much below average flow for the 1953 season. Practically all snow measurements as of May 1 are at or near a minimum of record since snow surveys were started in 1936. Because of relatively dry soils beneath the snow in high mountain areas, the expected runoff of the Rio Grande and its tributaries is expected to be also at or near the minimum of record. Summer flow of the Rio Grande will most probably be less than 50 percent of normal, with flow into the Middle Rio Grande Valley about 25 percent and possibly less than 10 percent of normal summer flow into Elephant Butte Reservoir. Annual flow will be higher in percent of normal as winter flow will exceed summer flow in the lower reaches of the stream. A season similar to 1951 is to be expected.

The snow accumulation on the Rio Grande drainage into San Luis Valley has been light since February 1 and forecasts of stream flow have been substantially reduced since that date. Snow has melted at medium and lower mountain elevations. Storage in irrigation reservoirs in San Luis Valley is two to three times that stored on May 1, 1952 and slightly above average. The water supply outlook is definitely in contrast to a year ago and similar to the 1951 season. Soil moisture conditions in valley irrigated districts are fair to good.

In northern New Mexico the snow has melted except for protected areas at high elevations. Mountain soils are wet on the surface but no increase in stream flow has been noted. Soil moisture conditions are reported as fair east of the river near Taos but dry in irrigated areas along the Rio Grande. El Vado reservoir has 16,600 acre-feet in storage. Flow of the Rio Grande at Otowi Bridge for the April-September 1953 period is forecast at 225,000 acre-feet or 25 percent of normal.

Storage in Elephant Butte and Caballo Reservoirs now totals 368,000 acre-feet. This is near four times that stored a year ago but still critically low in view of the present water supply outlook. Storage and expected inflow is a little over one-half of the usual irrigation water demand in southern New Mexico and west Texas.

Snow cover on the Pecos watershed is below normal. The summer runoff of the Pecos at Pecos, New Mexico, is expected to be 50 percent of normal.

Storage in Conchas reservoir is well below average and a year ago. Soil moisture conditions on the Tucumcari project are fair.

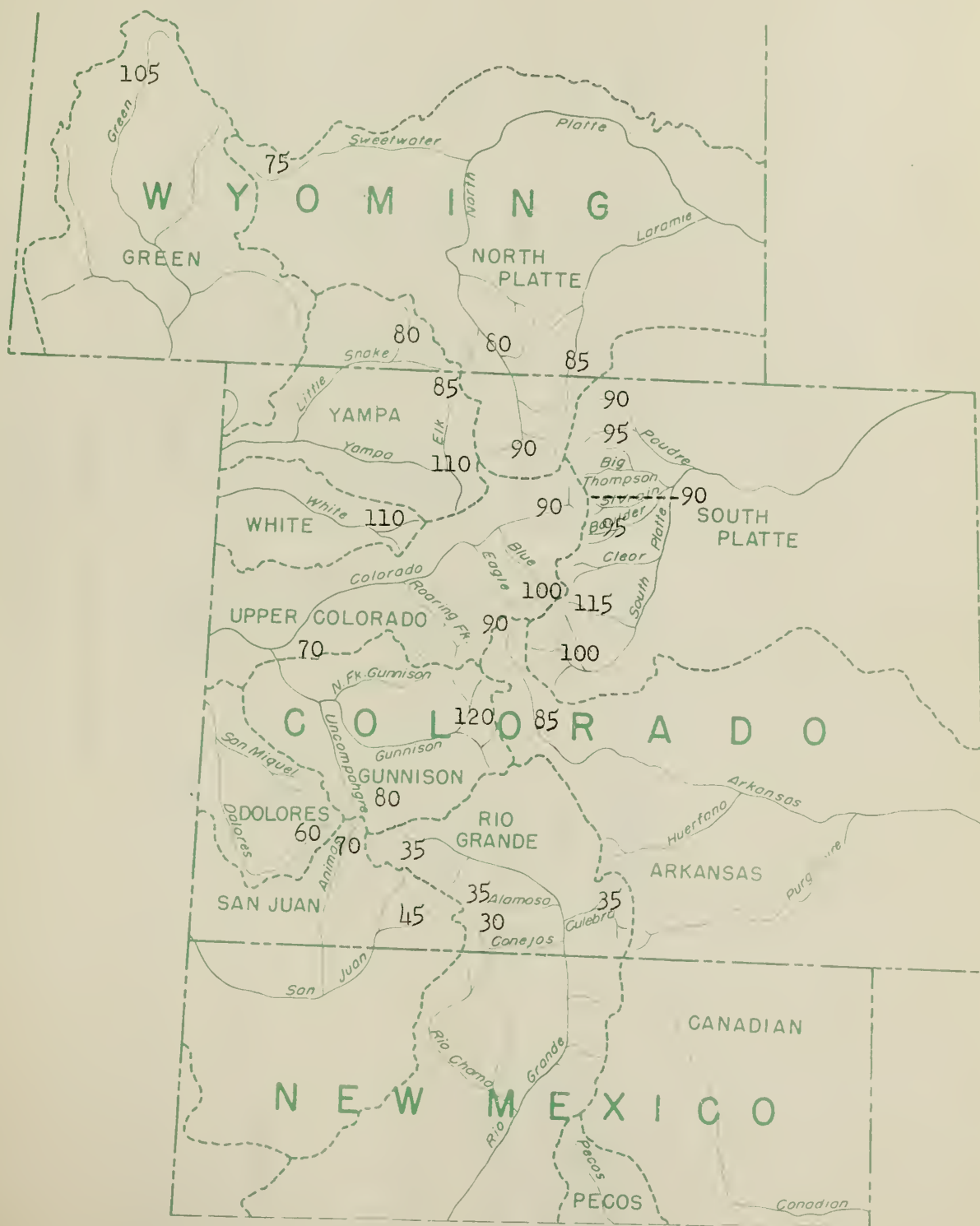
THE NEW YORK PUBLIC LIBRARY  
ASTOR LENOX TILDEN FOUNDATION  
1907

THE NEW YORK PUBLIC LIBRARY  
ASTOR LENOX TILDEN FOUNDATION  
1907

THE NEW YORK PUBLIC LIBRARY  
ASTOR LENOX TILDEN FOUNDATION  
1907

WATER CONTENT OF SNOW ON THE WATERSHEDS OF  
PLATTE, ARKANSAS, UPPER COLORADO AND RIO GRANDE BASINS  
BASED ON SNOW SURVEYS MADE APPROXIMATELY FIRST DAY OF MONTH

In Percent of Normal  
May 1, 1953



Note: The above percentages represent remaining snow cover in percent of normal as of May 1 and do not necessarily indicate expected runoff for the 1953 snow melt season.



SNOW SURVEYS AND IRRIGATION WATER FORECASTS  
RIO GRANDE BASIN

STATUS OF RESERVOIR STORAGE, May 1, 1953

STREAM	RESERVOIR	USABLE CAPACITY 1000 A.F.	1,000 A.F. Storage, May 1					10 yr. Avg. 1943-1952
			1953	1952	1951	1950		
RIO GRANDE	Rio Grande	45.0	17.6	2.6	5.1	19.7	13.1	
	Santa Maria	45.0	9.9	2.8	2.9	22.5	10.4	
	Sanchez	103.0	6.7	7.8	3.4	9.6	12.2	
	Terrace	17.7	6.3	3.4	1.8	4.4	3.8	
	Continental	26.7	6.3	6.9	5.0	19.0	11.1	
	Platoro	60.0	0.0	3.8	--	--	--	
	Elephant Butte	2273.7	233.6	53.9	196.8	615.2	713.5	
	Caballo	356.0	133.9	56.5	144.1	193.7	172.5	
CHAMA RIVER	El Vado	226.0	16.6	30.0	30.0	66.0	91.4	
CANADIAN RIVER	Conchas	600.0	146.4	201.2	268.3	288.8	318.1	
PECOS RIVER	Alamogordo	148.0		7.1	75.0	75.5	31.9	
	McMillan-Avalon	45.0		5.0	0.5	3.5	6.7	



SNOW SURVEYS AND IRRIGATION WATER FORECASTS  
for  
RIO GRANDE BASIN  
May 1, 1953

SUMMARY OF MAY 1 SNOW SURVEYS AND COMPARISON OF DATA WITH THAT OF PREVIOUS YEARS BY WATERSHEDS

WATERSHEDS	Snow Depth 1953 Inches	Snow Water Content in Inches				No. of courses in Avg.	Snow Density 1953 Percent	1953 Water Content in percent of	
		1953	1952	1951	15 yr.* Avg.			1952	15 yr. Avg.**
Rio Grande (Colo.)	9.2	2.8	13.7	4.4	7.9	18	30	20	30
Upper Rio Grande	13.2	3.4	17.7	7.0	10.4	3	26	19	33
Alamosa River	26.1	8.2	19.9	8.1	12.3	2	31	41	67
Conejos River	7.5	3.0	19.2	5.4	10.6	5	40	16	28
Culebra River	16.0	3.2	21.2	4.5	9.7	1	20	15	33

\*Some for shorter periods

P R E C I P I T A T I O N   D A T A

WATERSHED	STATE	Precipitation October 1 to April 30 Inches	Departure from normal Inches	Precipitation April Inches	Departure from normal Inches
Canadian	New Mexico	2.13	-3.34	0.25	-1.03
Rio Grande	Colorado	2.71	-1.53	0.72	-0.06
Rio Grande (N)	New Mexico	5.00	-3.22	0.85	-0.44
Rio Grande (S)	New Mexico	2.28	-1.01	0.41	-0.04
Pecos	New Mexico	2.40	-2.83	0.34	-0.51

\*\*Average of Selected High Elevation Stations



# RIO GRANDE DRAINAGE BASINS

## STREAM FLOW FORECASTS, May 1, 1953

BASIN AND STREAM	April-Sept., Incl., Streamflow, Acre Feet				10-year avg. 1941-1950
	Forecast 1953	1952	1951	1950	
RIO GRANDE					
South Fork at South Fork	75,000		64,000	100,000	146,000
Rio Grande at Del Norte	300,000	751,000	252,000	397,000	610,000
Alamosa above Terrace Res.	45,000			56,000	77,000
Conejos at Mogote	120,000	356,000	107,000	146,000	225,000
Culebra at San Luis	15,000		11,000	19,000	37,000
Rio Chama at Park View	100,000		86,000	154,000	232,000
Costilla at Costilla	18,000	36,000	15,000	15,000	36,000
Taos at Los Cordovas	12,000		5,500	6,200	43,000
Embudo Creek at Dixon	20,000	63,000	6,000	3,000	60,000
Rio Grande at Otowi Bridge	225,000*	1,167,400	201,000	267,000	907,000
Rio Grande at San Marcial	70,000		23,000	55,000	706,000
Pecos at Pecos	35,000		25,000	13,000	64,000

\*Including change in storage in El Vado Res.



RIO GRANDE DRAINAGE SNOW SURVEYS

May 1, 1953

May 1, 1955

Drainage Basin and Snow Course	No. and State	Elev.	Date of Survey	Snow Depth	Snow Cover Measurements				
					Water Content			Past Record	
					1953	1952	1951	Yrs. Rec.	Av. Water Content
RIO GRANDE IN COLORADO									
Wolf Creek Pass	26 Colo.	10000	4/30	In. 39.5	In. 10.3	In. 49.2	In. 20.9	17	In. 27.9
Upper Rio Grande	27 "	9350	4/30	0.0	0.0	2.7	0.0	17	2.2
Silver Lakes	47 "	9600	4/30	0.0	0.0	2.1	0.0	16	1.0
River Springs	49 "	9300	5/1	0.0	0.0	2.1	0.0	16	1.0
LaVeta Pass #2	74 "	9300	5/1	0.0	0.0	4.5	1.0	17	3.7
Summitville	76 "	11500	5/4	52.3	16.4	37.7	16.2	13	23.7
Cumbres Pass #2	77 "	10000	4/28	9.2	4.0	19.5	10.5	17	17.8
Santa Maria	80 "	9700	5/1	0.0	0.0	1.1	0.0	14	1.1
Culebra	82 "	10000	4/30	16.0	3.2	21.2	4.5	13	9.7
Ft. Garland	84 "	8200	4/30	0.0	0.0	0.0	0.0	13	0.5
Platoro	108 "	9950	4/28	10.2	3.8	30.5	8.6	4	15.6
West Conejos	109 "	9450	4/28	0.0	0.0	3.2	0.0	4	0.9
La Manga	110 "	10100	4/27	17.9	7.2	40.8	7.7	4	17.9
Pyramid	122 "	10300	5/1	4.4	1.1	10.6	1.9	4	5.5
Spr. Creek Pass	123 "	10900	5/1	16.8	4.3	13.9	3.9	4	7.4
Pool Table Mt.	124 "	10000	4/29	0.0	0.0	3.0	1.4	4	2.5
Lake Humphreys	125 "	9300	4/29	0.0	0.0	0.0	0.0	4	0.2
Cochetopa Pass	126 "	10000	4/30	0.0	0.0	4.5	3.1	4	2.9
Howardville	151 "	9800	4/29	10.2	3.6	15.2	4.9	2	--
Red Mt. Pass	153 "	11000	4/29	74.0	26.5	45.8	28.8	2	--
Porcupine	154 "	10400	5/1	9.9	2.7	14.1	3.8	2	---
Wolf Creek Summit	155 "	11000	4/30	65.5	19.1	51.7	22.1	2	--
Average for drainage				9.2	2.8	13.7	4.4		7.9
UPPER RIO GRANDE									
Wolf Creek Pass	26 Colo.	10000	4/30	39.5	10.3	49.2	20.9	17	27.9
Upper Rio Grande	27 "	9350	4/30	0.0	0.0	2.7	0.0	17	2.2
Santa Maria	80 "	9700	5/1	0.0	0.0	1.1	0.0	14	1.1
Average for drainage				13.2	3.4	17.7	7.0		10.4
ALAMOSA RIVER									
Silver Lakes	47 Colo.	9600	5/1	0.0	0.0	2.1	0.0	16	1.0
Summitville	76 "	11500	5/4	52.3	16.4	37.7	16.2	13	23.7
Average for drainage				26.1	8.2	19.9	8.1		12.3
CONEJOS RIVER									
River Springs	49 Colo.	9300	5/1	0.0	0.0	2.2	0.0	16	1.0
Cumbres Pass #2	77 "	10000	4/28	9.2	4.0	19.5	10.5	17	17.8
Platoro	108 "	9950	4/28	10.2	3.8	30.5	8.6	4	15.6
West Conejos	109 "	9450	4/28	0.0	0.0	3.2	0.0	4	0.9
La Manga	110 "	10100	4/27	17.9	7.2	40.8	7.7	4	17.9
Average for drainage				7.5	3.0	19.2	5.4		10.6
CULEBRA RIVER									
Culebra	82 Colo.	10000	4/30	16.0	3.2	21.2	4.5	13	9.7

THE HISTORY OF THE

NAME		RESIDENCE		DATE		REMARKS	
J. H. B.		New York		1850		First visit	
J. H. B.		New York		1851		Second visit	
J. H. B.		New York		1852		Third visit	
J. H. B.		New York		1853		Fourth visit	
J. H. B.		New York		1854		Fifth visit	
J. H. B.		New York		1855		Sixth visit	
J. H. B.		New York		1856		Seventh visit	
J. H. B.		New York		1857		Eighth visit	
J. H. B.		New York		1858		Ninth visit	
J. H. B.		New York		1859		Tenth visit	

## LIST AND LOCATION OF SNOW COURSES

Platte, Arkansas, Colorado  
and Rio Grande Drainages

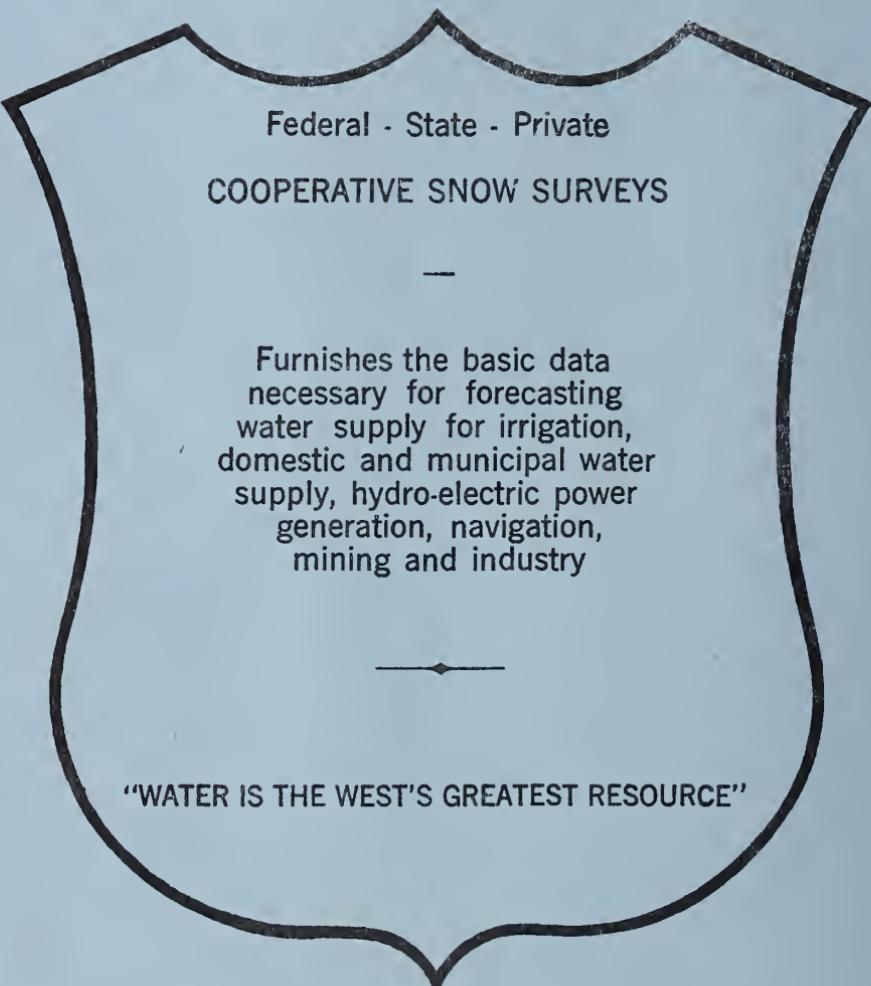
No.	Name	Sec.	Twp.	Rge.	Elev.	No.	Name	Sec.	Twp.	Rge.	Elev.
<u>Cheyenne</u>						<u>Upper Colorado</u>					
1	SD Upper Spearfish	21	3N	1E	6500	12	C Phantom Valley	7	5N	75W	9300
<u>North Platte</u>						16	C Berthoud Pass	35	2S	75W	9700
7	C Park View	24	5N	78W	9200	37	C M. F. Camp Ground	16	3S	77W	9000
8	C Columbine	21	5N	82W	9300	44	C Fiddler Gulch	1	8S	80W	11000
106	C Northgate	7	11N	79W	8500	59	C Lulu	25	6N	76W	10200
7	W Bottle Creek	24	14N	85W	8200	64	C N. Inlet Grand Lake	26	4N	75W	9000
8	W Webber Spring	27	14N	85W	9000	65	C Lake Irene	8	5N	75W	10600
9	W Old Battle	29	14N	85W	9800	69	C Arrow	34	1S	75W	9900
37	W North French Creek	27	16N	80W	10200	70	C Lapland	16	2S	76W	9500
38	W North Barrett Creek	30	16N	80W	9400	79	C Fremont Pass	2	8S	76W	11400
39	W Ryan Park	34	16N	81W	8400	91	C Lynx Pass	27	2N	88W	9100
67	W Spring Creek	32	15N	85W	9000	96	C Shrine Pass	15	6S	79W	10500
68	W Albany	18	14N	78W	9400	97	C Grizzly Peak	2	5S	76W	11250
71	W Pearl	18	12N	82W	8900	102	C Glen-Mar Ranch	31	2S	77W	8850
<u>Laramie</u>						106	C Monarch Lake	30	2N	74W	8500
88	C Roach	5	10N	77W	9800	112	C Granby	11	2N	77W	8700
111	C McIntyre	35	10N	76W	9100	127	C Grand Lake	36	4N	75W	8600
3	W Brooklyn Lake	11	16N	78W	10200	138	C Berthoud Summit	10	2S	75W	11300
11	W Foxpark	21	13N	78W	9200	139	C Frazer View	34	2S	75W	10600
35	W Libby Lodge	29	16N	78W	8700	143	C Gore Pass	2	1N	82W	8900
36	W Hairpin Turn	24	16N	79W	9500	146	C Frisco	16	6S	78W	9300
<u>Sweetwater</u>						147	C Snake River	9	5S	76W	9700
29	W Grannier Meadows	19	30N	100W	9000	158	C Summit Ranch	8	4S	78W	10000
47	W South Pass	13	30N	101W	9000	163	C Vail Pass	28	5S	79W	10000
57	W Larson Creek	12	30N	103W	9000	167	C Kokomo	23	7S	79W	10600
<u>Laramie Peaks District</u>						168	C Pando	10	7S	80W	9500
39	W La Bonte	11	27N	74W	8450	33	C Ind. Pass Tunnel	30	11S	82W	10700
70	W Boxelder	31	30N	75W	9000	34	C North Lost Trail	20	11S	87W	9200
<u>South Platte</u>						45	C Nast	1	9S	83W	8700
1	C Cameron Pass	2	6N	76W	10300	100	C Ivanhoe	12	9S	82W	10400
2	C Chambers Lake	6	7N	75W	9000	144	C Ruby	1	12S	83W	11500
3	C Big South	33	8N	75W	8600	<u>Yampa</u>					
5	C East Portal	2	2S	74W	9400	6	C Dry Lake	26	7N	84W	8300
14	C Hoosier Pass	13	8S	78W	11400	9	C Elk River	21	5N	82W	9300
15	C Fairplay	33	9S	77W	10000	140	C Routt Line	13	5N	85W	9700
41	C Wild Basin	24	3N	74W	10000	141	C Rabbit Ears	30	5N	85W	9550
50	C Deadman Hill	26	10N	75W	10200	142	C Yampa View	21	5N	84W	8500
60	C University Camp	26	1N	73W	10300	<u>White</u>					
61	C Loveland Pass	27	4S	76W	10600	35	C Burro Mountain	15	2S	91W	9000
68	C Hour Glass Lake	18	7N	73W	9500	36	C Rio Blanco	28	1N	85W	8500
83	C Jefferson Creek	14	7S	76W	10100	<u>Plateau Creek</u>					
95	C Hidden Valley	23	5N	75W	9550	56	C Mesa Lakes	35	11S	96W	10000
115	C Deer Ridge	19	5N	75W	9050	85	C Trickle Divide	23	11S	94W	10000
116	C Copeland Lake	21	3N	75W	8600	<u>Gunnison River</u>					
117	C Empire	21	3S	75W	9650	18	C Crested Butte	22	13S	86W	9000
118	C Geneva Park	18	6S	74W	9750	46	C Park Cone	19	14S	82W	9700
120	C Antero	1	13S	77W	9200	53	C Alexander Lake	2	12S	25W	10000
128	C Red Feather	26	10N	74W	9000	55	C Snowshoe Mesa	14	13S	89W	7500
133	C Moffatt	2	2S	74W	9400	58	C Ironton Park	29	43N	7W	9800
134	C Ward	1	1N	73W	9500	87	C Park Reservoir	34	11S	94W	9500
137	C Berthoud Falls	16	3S	75W	10500	89	C Porphyry Creek	19	49N	6E	10800
148	C Longs Peak	32	4N	75W	10500	101	C Kannah Creek	5	12S	95W	10700
156	C Lost Lake	32	8N	75W	9300	104	C Lake City	13	43N	4W	10300
34	C Pole Mountain	35	15N	72W	8700	132	C McClure Pass	1	11S	89W	9500
<u>Arkansas River</u>						153	C Red Mountain	13	42N	8W	11000
19	C Tennessee Pass	21	8S	80W	10200	<u>San Juan</u>					
21	C Twin Lakes Tunnel	22	11S	82W	10500	29	C Upper San Juan	10	37N	1E	10000
72	C Whiskey Creek	37.2N	105W	10300	30	C Silverton	10	41N	7W	9400	
74	C La Veta Pass	22	28S	70W	9300	31	C Cascade	12	39N	9W	8850
78	C Four Mile Park	23	11S	81W	9700	135	C La Plata	4	36N	11W	9700
81	C Blue Lakes	30	31S	69W	10000	149	C Spud Mountain	32	40N	8W	10700
92	C Monarch Pass	16	49N	6E	10500	150	C Molss Lake	7	40N	7W	10500
119	C Saint Elmo	31	15S	80W	10600	151	C Howardville	15	41N	7W	9800
121	C Timberline	8	9S	81W	11100	162	C Mineral Creek	36	42N	8W	10300
165	C Cooper Hill	2	8S	80W	10600						
166	C East Fork	9	8S	79W	10700						

LIST AND LOCATION OF SNOW COURSES (CONTINUED)

No.	Name	Sec.	Twp.	Rge.	Elev.	No.	Name	Sec.	Twp.	Rge.	Elev.
<u>Dolores</u>						<u>Arizona (Williams)</u>					
23 C	Rioo	11	39N	11W	8700	7 A	Iron Springs	22	14N	3W	6000
24 C	Teilluride	6	42N	8W	8600	15 A	Willow Ranch	16	21N	11W	5000
25 C	Lizzard Head	24	41N	10W	10300	<u>Arizona (Lower Colorado)</u>					
114 C	Trout Lake	8	41N	9W	9700	9 A	Chalendar	27	22N	3E	7100
<u>Green</u>						10 A	Grand Canyon	21	30N	4E	7500
23 W	Dutoh Joe	33	31N	104W	8700	11 A	Bright Angel	34	33N	4E	8400
24 W	Mulligan Park	17	35N	108W	8900	<u>Rio Grande</u>					
25 W	Kendall R. S.	23	38N	110W	7900	26 C	Wolf Creek	4	37N	2E	10000
26 W	Loomis Park	14	37W	111W	8500	27 C	Upper Rio Grande	13	40N	4W	9350
27 W	Snyder Basin	15	29N	114W	8040	47 C	Silver Lakes	15	36N	5E	9600
28 W	Piney La Barge	19	29N	114W	8820	49 C	River Springs	25	33N	6E	9300
<u>Arizona (Gila)</u>						76 C	Summitville	30	37N	4E	11500
11 NM	Frisco Divide	21	6S	20W	8000	77 C	Cumbres Pass	17	32N	5E	10000
14 NM	State Line	5	6S	21W	8000	80 C	Santa Maria	8	41N	2W	9700
22 NM	Taylor Creek	20	10S	10W	7850	82 C	Culebra	37.2N	105.2W		10000
23 NM	Inman	6	11S	10W	7800	84 C	Fort Garland	13	29N	72W	8200
1 A	Nutriso	23	6N	30E	8500	108 C	Platoro	22	36N	4W	9950
2 A	Beaver Head	13	4N	30E	8000	109 C	West Conejos	25	35N	4E	9450
3 A	Coronado Trail	26	5N	30E	8000	110 C	La Manga	11	33N	5E	10000
29 A	Rose Canyon	15	12S	16E	7300	122 C	Pyramid	26	41N	5W	10300
30 A	Bear Wallow	6	12S	16E	8100	123 C	Spring Creek Pass	2	42N	3W	10900
<u>Arizona (Salt)</u>						124 C	Pool Table Mt.	19	41N	2E	10000
4 A	McNary	14	8N	23E	7200	125 C	Lake Humphrey	32	40N	1E	9300
5 A	Forest Dale	2	9N	21E	6000	126 C	Cochetopa Pass	12	45N	3E	10000
6 A	Milk Ranch	28	8N	23E	7000	154 C	Porcupine	2	41N	3W	10400
20 A	Pacheta				7800	155 C	Wolf Creek Summit	6	37N	2E	11000
21 A	Fort Apache	18	7N	27E	9000	1 NM	Red River	29	28N	15E	9500
22 A	Baldy	28	7N	27E	9000	2 NM	Taos Canyon	10	25N	15E	9000
23 A	Maverick Fork	13	6N	27E	9050	4 NM	Aspen Grove	12	18N	10E	9100
31 A	Workman Creek	33	6N	14E	5860	9 NM	Hematite Park	8	28N	15E	9500
<u>Arizona (Little Colorado)</u>						12 NM	Tres Ritos	23	22N	13E	9000
12 A	Fort Valley	22	22N	6E	7350	15 NM	Payrole	16	28N	7E	9700
13 A	Mormon Lake	13	18N	8E	7350	17 NM	Chama Divide	36.9N	106.7W		7750
19 A	Mormon Mountain	14	18N	8E	7500	18 NM	Chamita	36.9N	106.7W		8500
<u>Arizona (Verde)</u>						19 NM	Cordova	22	22N	13E	10100
8 A	Camp Wood	3	16N	6W	5700	20 NM	Panohuela	27	19N	12E	8300
16 A	Antelope Park	29	19N	8E	7300	21 NM	Big Tesuque	17	18N	11E	10000
17 A	Casner Park	19	18N	8E	6930	24 NM	Elk Cabin	8	18N	11E	8250
18 A	Munds Park	7	18N	7E	6500	26 NM	Rio En Medio	8	18N	11E	10400
						28 NM	Quemazon	34	20N	5E	9300
						29 NM	Bateman	5	26N	6E	9300
						31 NM	Fenton Hill	18	19N	3W	8900

SD - South Dakota; C - Colorado; W - Wyoming; A - Arizona; NM - New Mexico





Federal - State - Private  
COOPERATIVE SNOW SURVEYS

---

Furnishes the basic data  
necessary for forecasting  
water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

---

"WATER IS THE WEST'S GREATEST RESOURCE"